

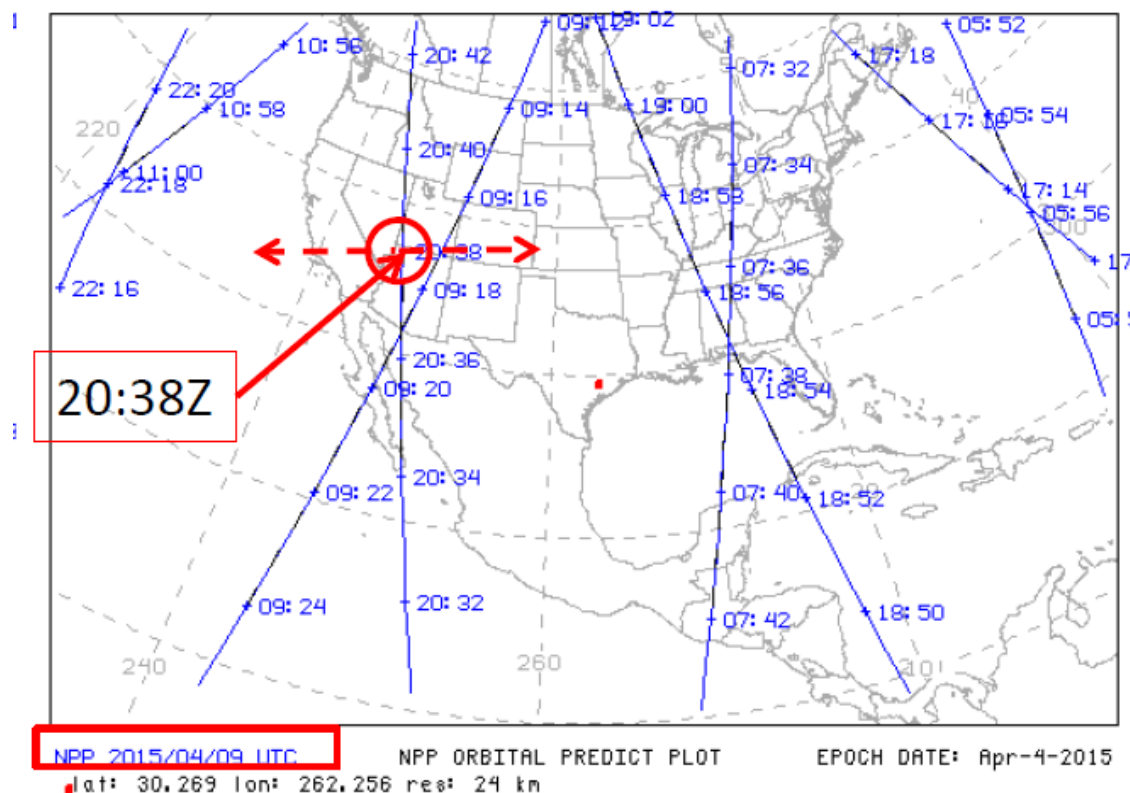
RAQMS 20150408 SONGNEX

54hr FX for 18Z April 09 (Transit to Broomfield), 2015

S-NPP (CrIS) overpass on 04/09

NUCAPS CO₂, O₃, CO, CH₄ Validation Opportunity –**Eastern edge of swath**

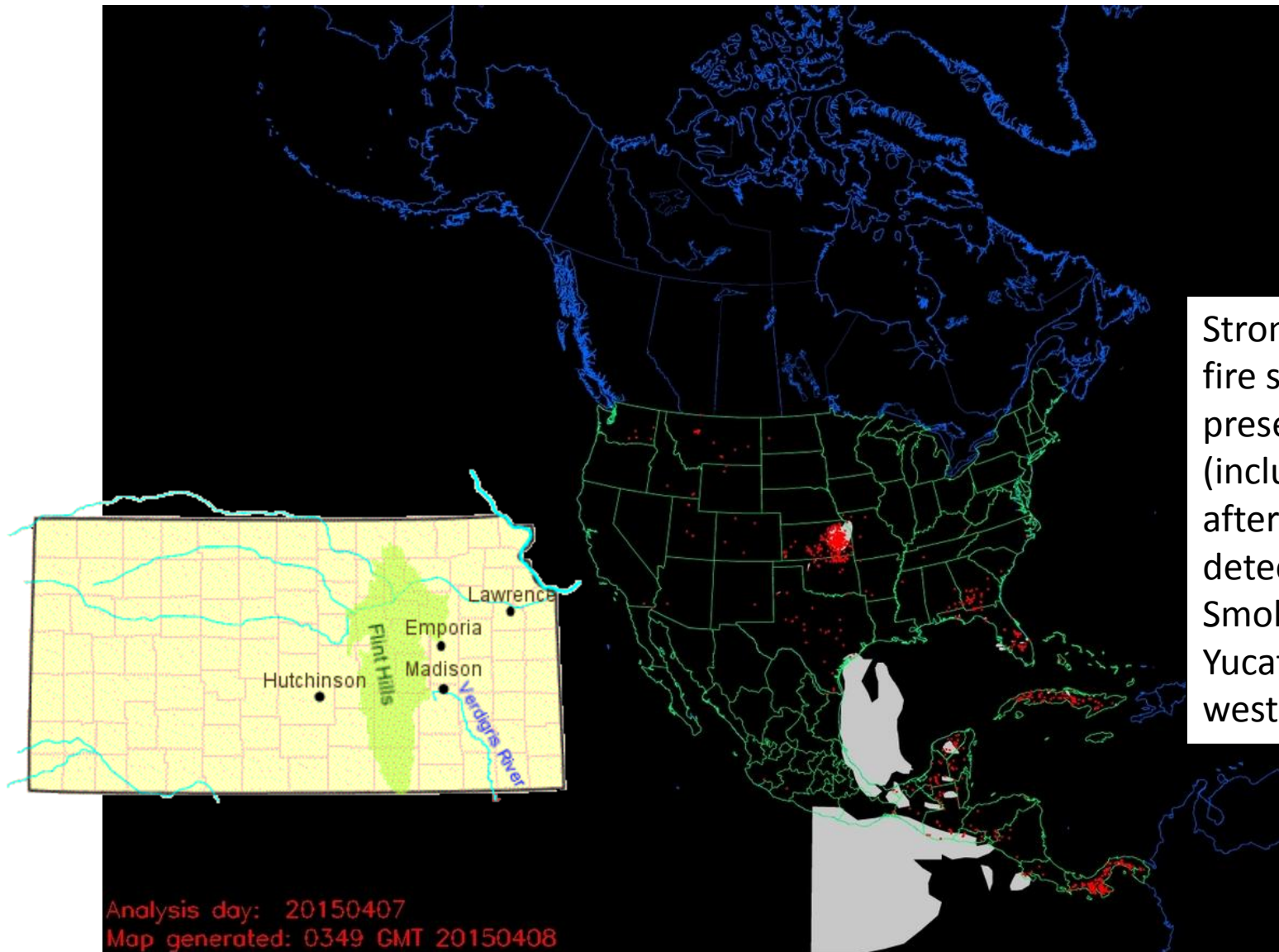
S-NPP overpass West of Broomfield at 20:38Z (2:38pm Mountain)



Approximate swath width

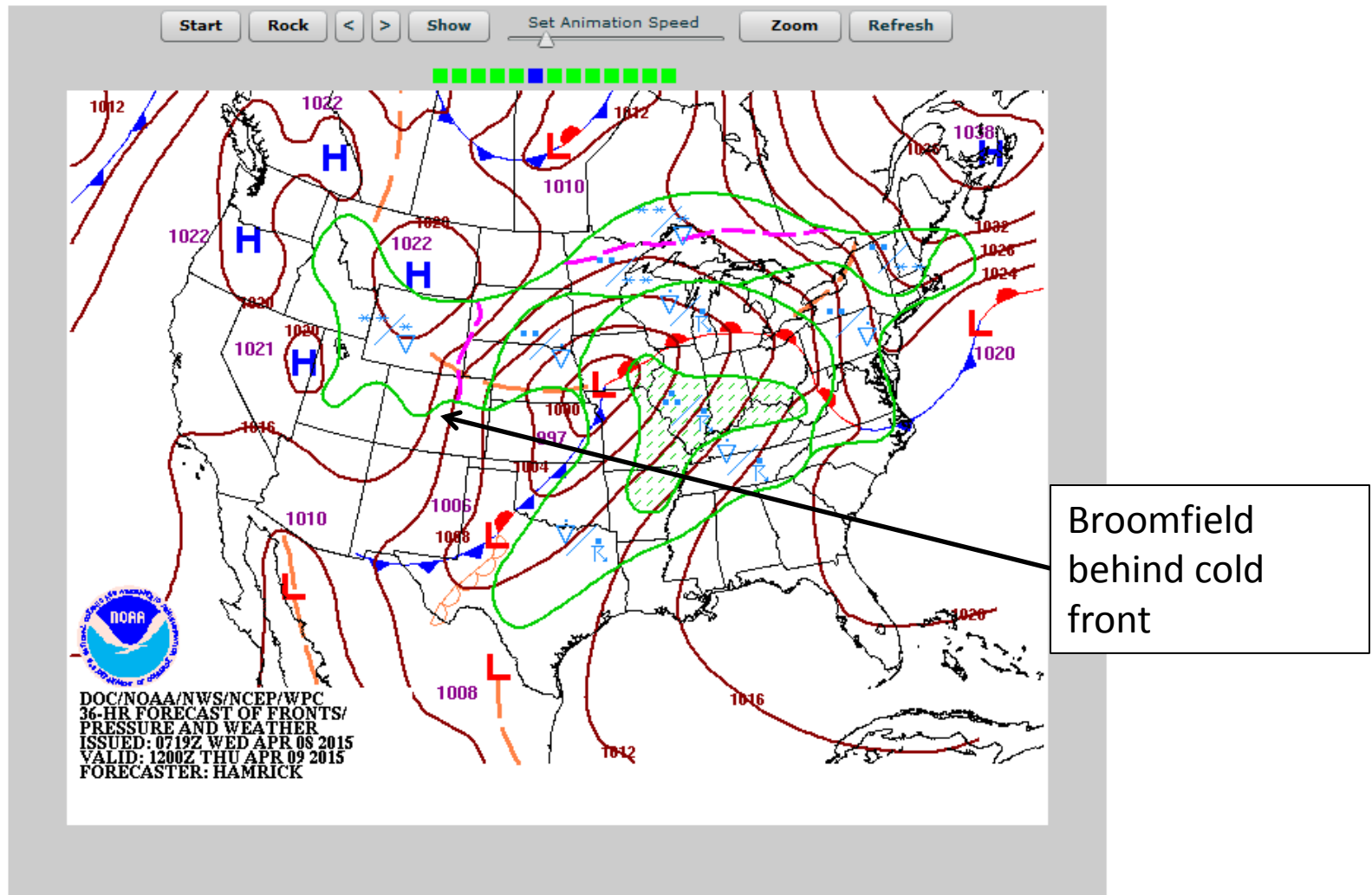
NESDIS Hazard Mapping System (HMS)

<http://www.ospo.noaa.gov/data/land/fire/currenthms.jpg>



Strong Flint Hill
fire signature
present yesterday
(including
afternoon
detection) –
Smoke from
Yucatan in
western Gulf

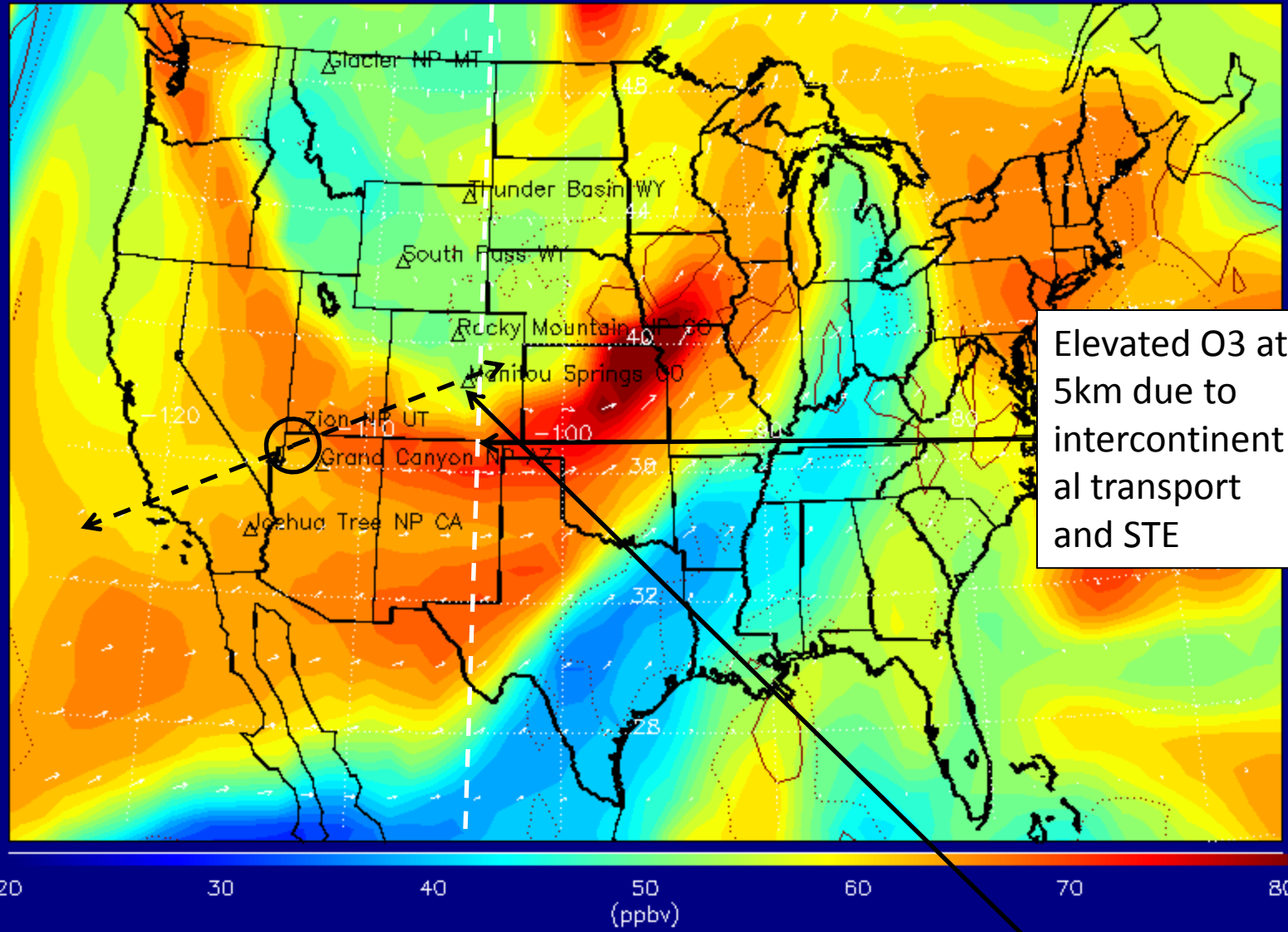
36hr NCEP/WPC forecast valid 12Z 04/09/2015



<http://www.hpc.ncep.noaa.gov/basicwx/day0-7loop.html>

05km O₃ 18Z 20150409

(MSL Pressure Contoured (white)/95-75% Convective Precip (Red) 95% CPDP=0.0765177 mm/hr



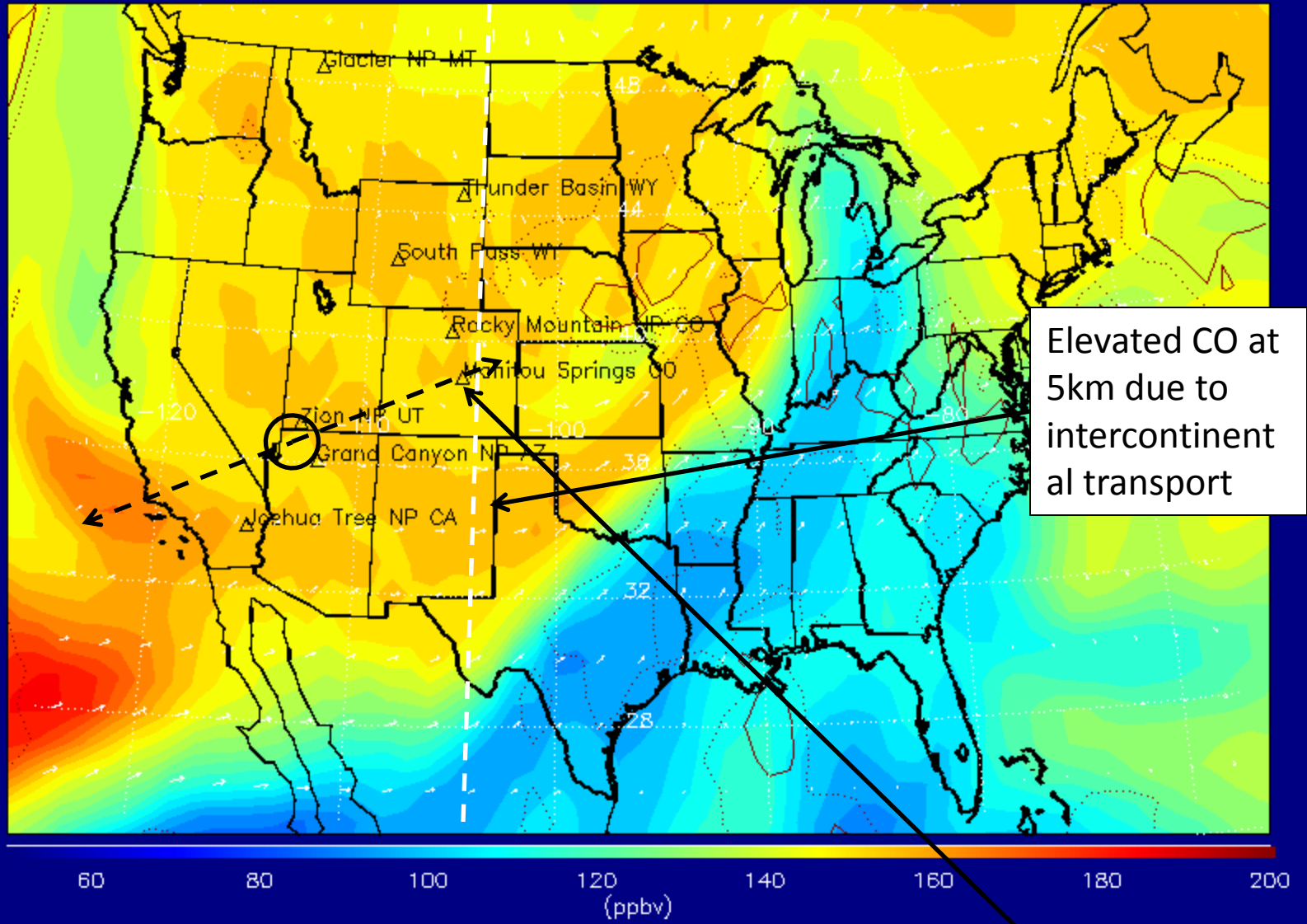
RAQMS₆ 54hr Fx Initialized 12Z 20150407

Broomfield on Eastern edge of S-NPP swath

Approximate swath width

05km CO 18Z 20150409

(MSL Pressure Contoured (white)/95-75% Convective Precip (Red) 95% CPCP=0.0765177 mm/hr



Elevated CO at 5km due to intercontinental transport

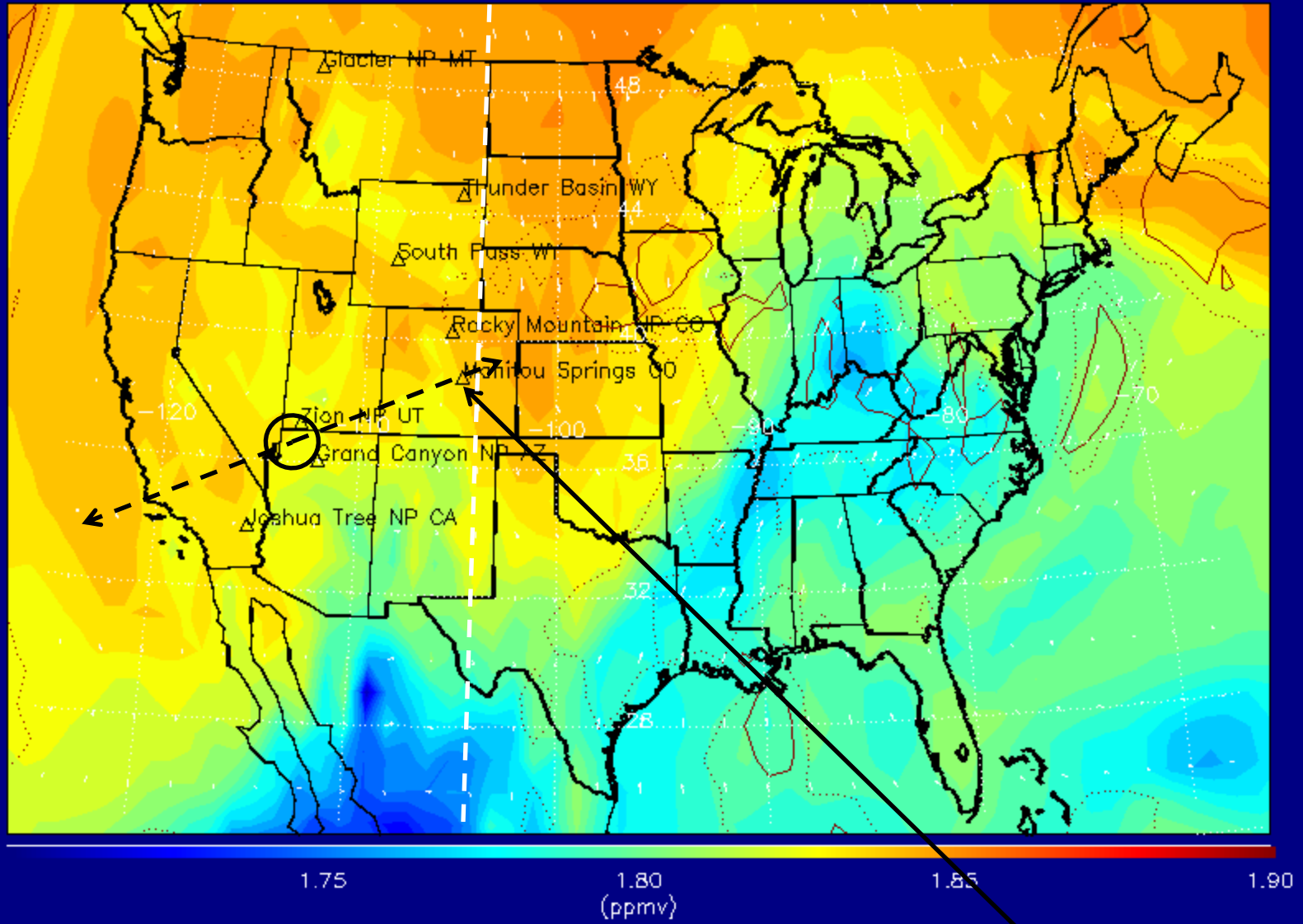
RAQMS₆ 54hr Fx Initialized 12Z 20150407

Broomfield on Eastern edge of S-NPP swath

Approximate swath width

01km AGL CH4 18Z 20150409

(MSL Pressure Contoured (white)/95–75% Convective Precip (Red) 95% CPCP=0.0765177 mm/hr

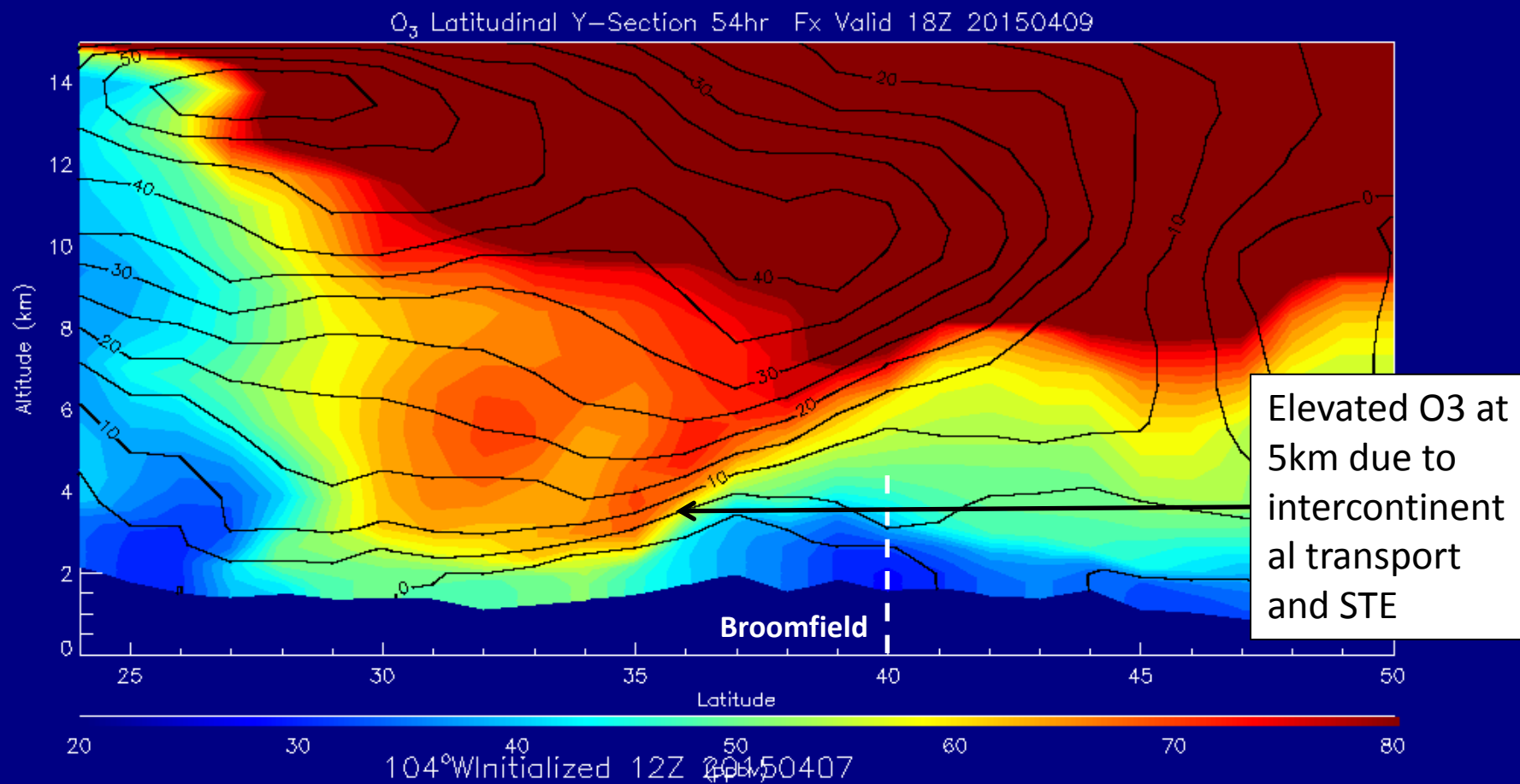


RAQMS₆ 54hr Fx Initialized 12Z 20150407

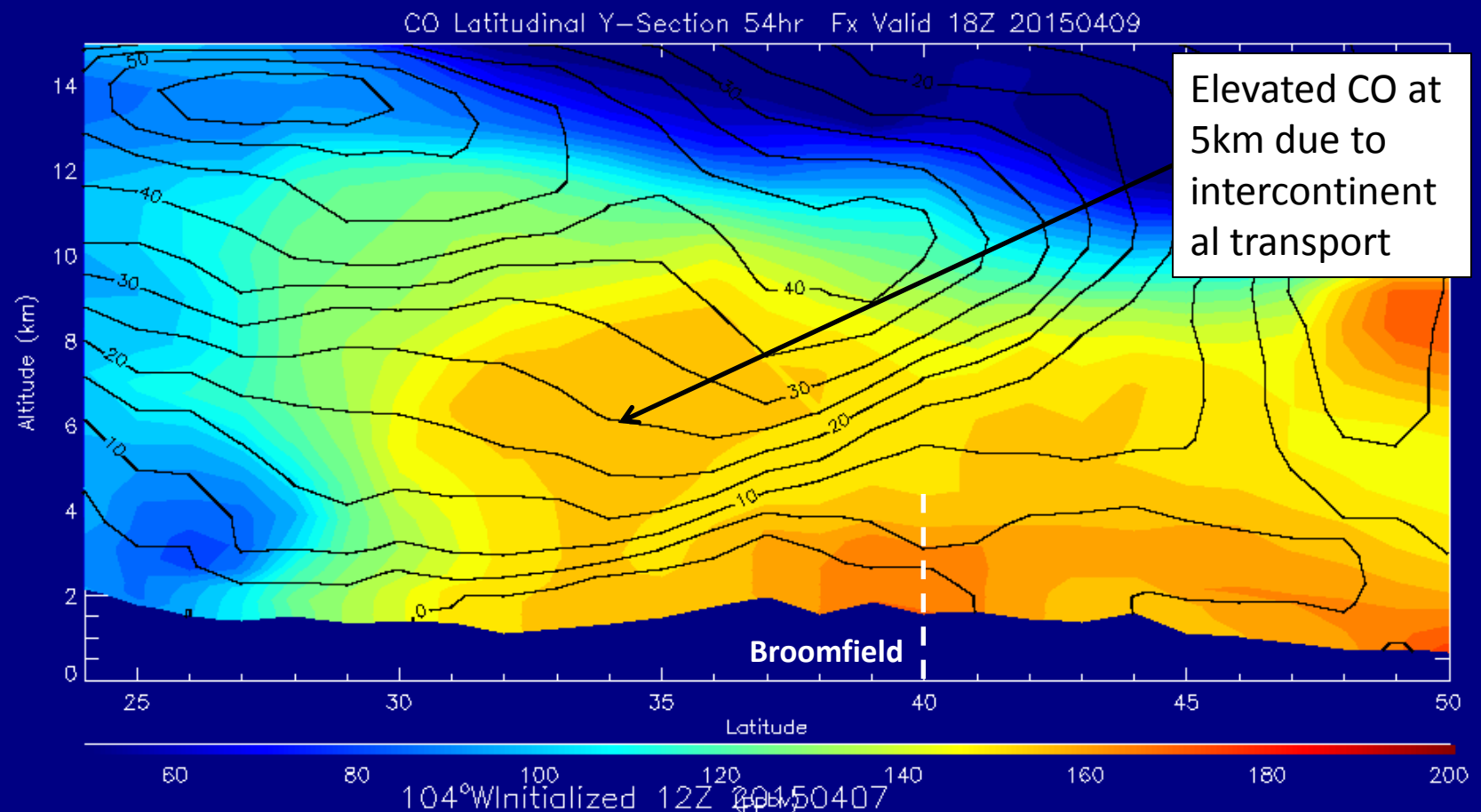
Broomfield on Eastern edge of S-NPP swath

RAQMS surface CH4 constrained with 1990 mixing ratio – introduces ~0.1ppmv low bias

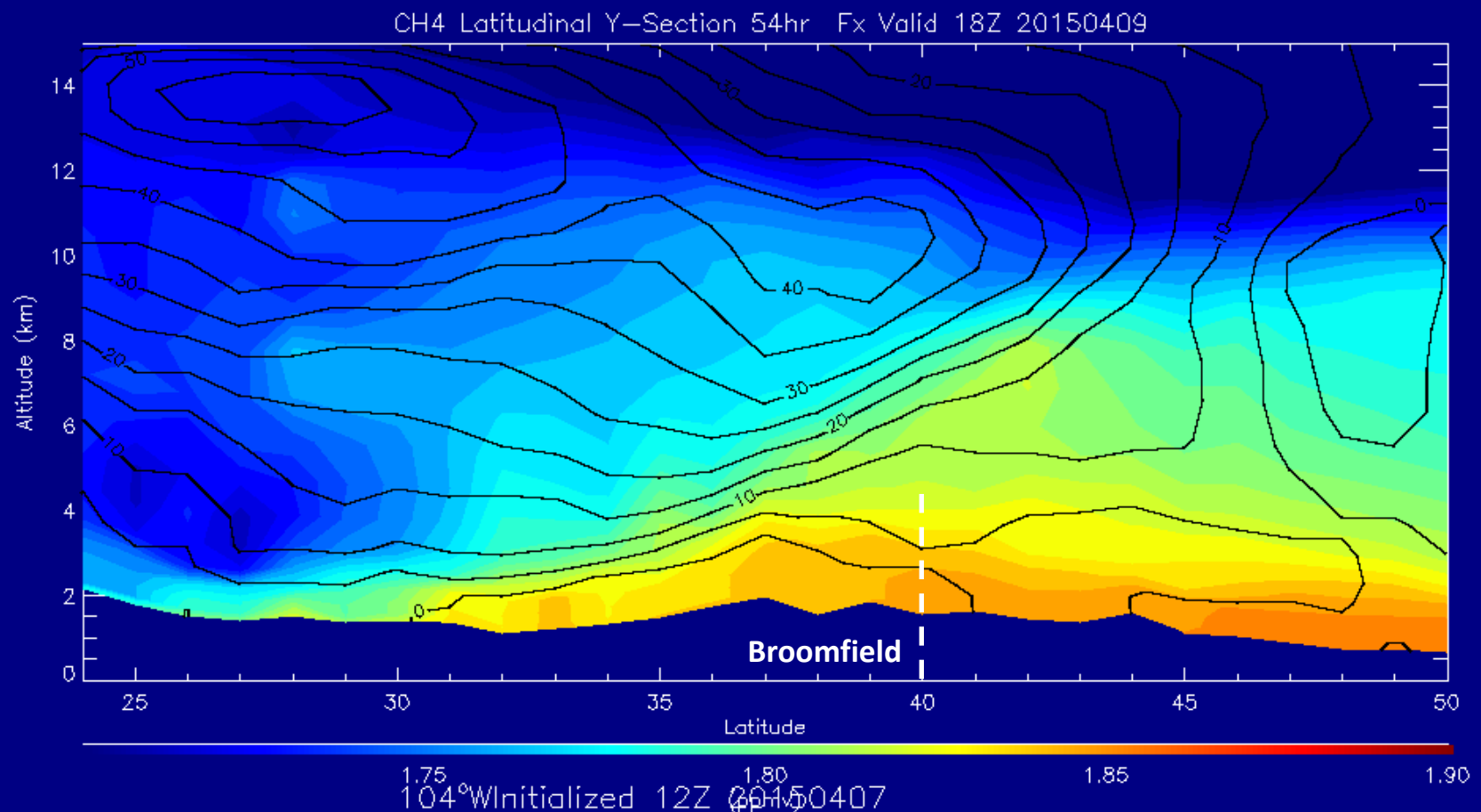
RAQMS 54hr FX O3 Cross-section at 104W (Broomfield Transit)



RAQMS 54hr FX CO Cross-section at 104W (Broomfield Transit)



RAQMS 54hr FX CH₄ Cross-section at 104W (Broomfield Transit)



RAQMS surface CH₄ constrained with 1990 mixing ratio – introduces ~0.1ppmv low bias